

F O R S A L E

OXOCHEM, INC.

A WHOLLY OWNED SUBSIDIARY OF
COMMONWEALTH OIL REFINING COMPANY, INC.
PENUELAS, PUERTO RICO



COMMONWEALTH OIL
REFINING COMPANY, INC.

OXOCHEM, INC.

A CHEMICAL PLANT FOR THE
PRODUCTION OF OXO-ALCOHOLS

PLANT INFORMATION

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I. INTRODUCTION

Background

The Oxo Alcohol Plant was originally owned by Oxochem Enterprise, a joint venture between CORCO and W. R. Grace & Co. Feedstock was obtained from CORCO and Puerto Rico Olefins Co., a joint venture between CORCO and PPG Industries, Inc. The plant commenced operations in 1970 and was expanded to its present capacity in 1975.

The facilities available are capable of the following annual production:

<u>Product</u>	<u>Capacity (Design & Demonstrated)</u>
2-Ethylhexanol	292 Million Pounds
Normal Butanol	64 Million Pounds
Iso-Butanol	149 Million Pounds

Operation of the joint venture was terminated in 1978 and subsequently the plant mothballed, when CORCO sought protection under Chapter XI of the Bankruptcy Act. In order for CORCO to emerge from bankruptcy in July 1981, the Oxochem assets were acquired totally by CORCO, as part of a plan of arrangement.

Mothballing of the plant was completed in July 1979 and preservation of the mothballed status continued for the last two years. The equipment is considered to be in excellent conditions.

Location

The Oxochem Plant is part of a large scale petrochemical complex on the south coast of Puerto Rico, which include the following facilities:

- | | |
|---------------------------|------------------------|
| - CORCO | - Union Carbide Caribe |
| - Puerto Rico Olefins Co. | - PPG Caribe |
| - Caribe Isoprene Corp. | - Rico Chemical Co. |
| - Hercor Chemical Corp. | - Air Products Co. |

Puerto Rico Olefins, PPG Caribe and Rico Chemical discontinued operations in Puerto Rico.

Oxochem, Inc. is located in the Peñuelas Complex near Ponce, on KM 5.5, state road No. 385. The general location is shown in figures 1 and 2.

Confidentiality Agreements

Certain designs, technical information and records of the Oxo Alcohol Plant are of a confidential nature and subject to secrecy agreements. In the event that such confidentiality is required for the examination or purchase of the property, then an appropriate secrecy agreement will have to be obtained.

Further Information

All inquiries and requests for further information should be directed to:

Mr. Francisco Quiñones
Manager Joint Ventures
Commonwealth Oil Refining Co., Inc.
Petrochemical Complex
Ponce, Puerto Rico 00731
Tel. (809) 843-3030

or

Mr. Anthony Turano
Vice President Economics and Planning
Commonwealth Oil Refining Co., Inc.
8626 Tesoro Drive
San Antonio, Texas 78217
Tel. (512) 828-8444

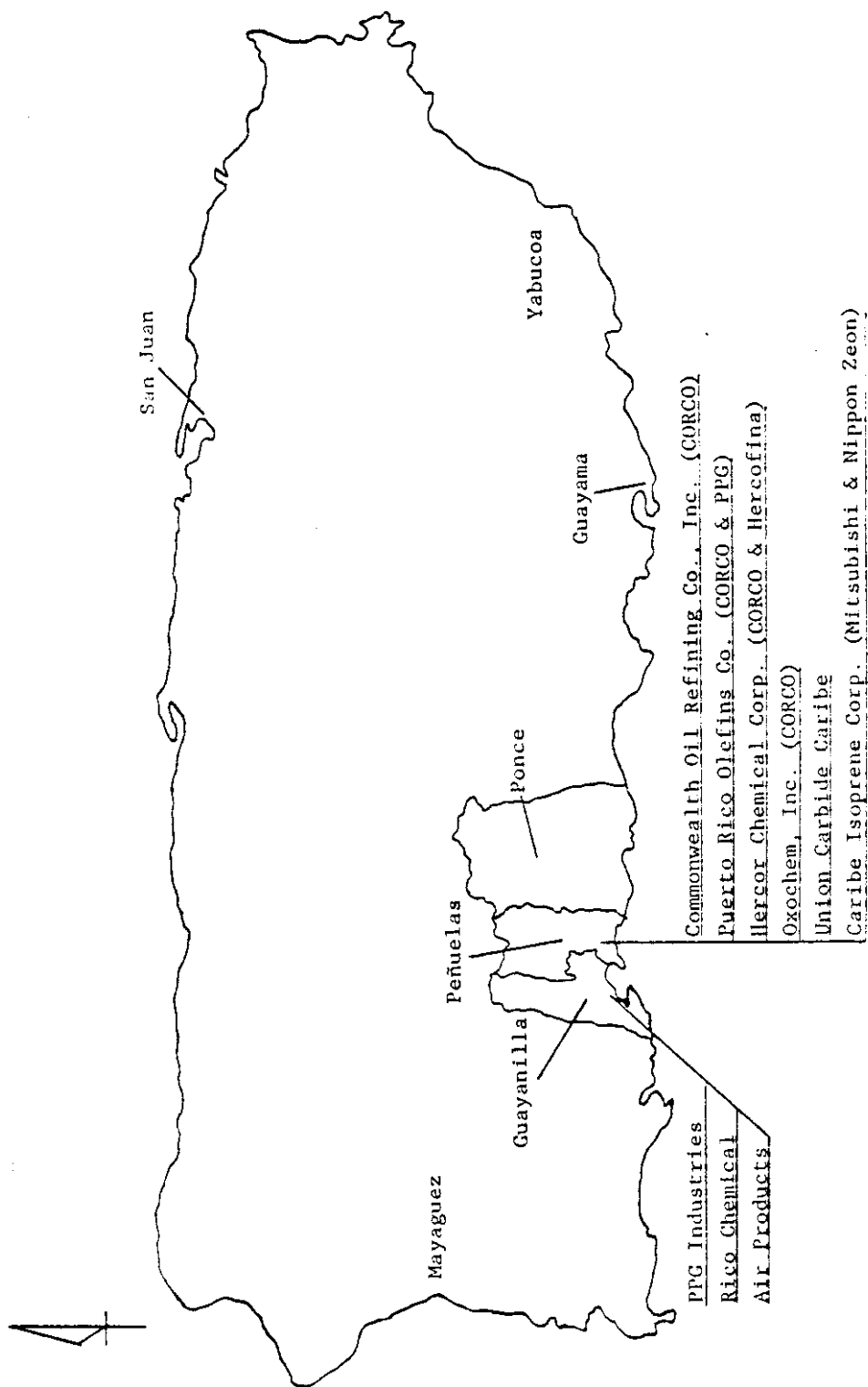


FIGURE 1 LOCATION OF PETROCHEMICAL COMPLEX

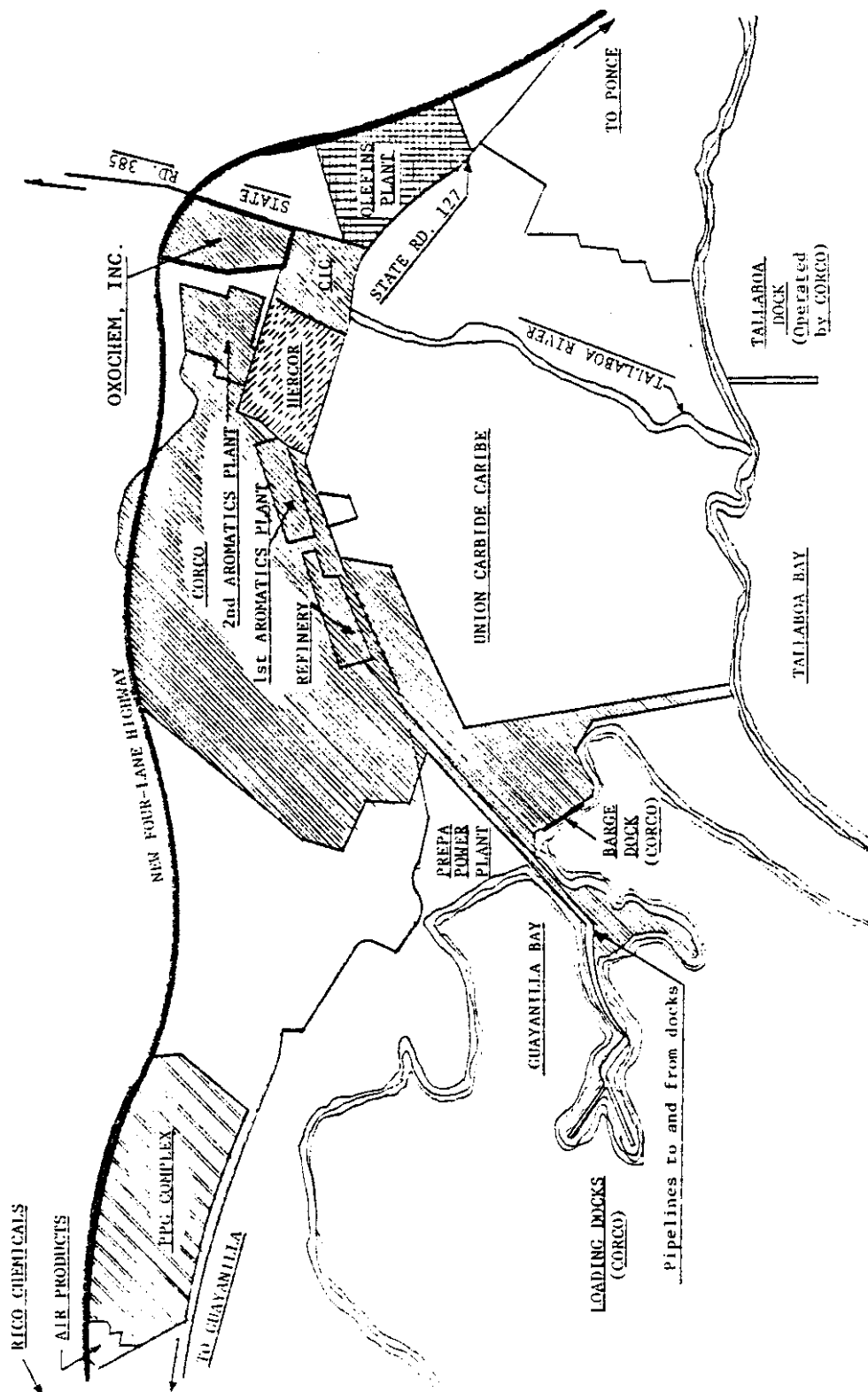


FIGURE 2 - LOCATION OF OXOCHEM INC.

II. OXOCHEM PLANT DESCRIPTION

Plant facilities consist of the following sections, which will be briefly discussed below:

Gas Generation	Utilities
Reaction Sections	Product Storage
Distillation Sections	

Process design for the Oxo Reaction and refining operations was provided by BASF (Badische Anilin & Soda-Fabrik AG) and covers the major part of the plant design.

Haldor Topsoe provided the process design for the steam-hydrocarbon reformer and Shell the partial oxidation process.

Mechanical design, procurement and construction was done by Fluor Engineers and Constructors, Inc.

Gas Generation

Included in this section are:

Two synthesis gas generators using the type 300 Shell design units capable of producing 24 MMSCF per day of gases from raffinate, butane and byproduct streams. Each unit consists of a reactor, a waste heat boiler and related equipment to cool and clean the gas. Compression to the required 4,600 psig is provided using two IR 3 HHE-4 reciprocating compressors of 1,700 HP and one IR 3 HHE-4 unit of 2,200 HP.

A hydrogen producing unit consisting of the Haldor Topsoe reformer, which provides 10 MMSCF per day of 98.5% hydrogen. Shift converters are also available to be used when hydrogen is produced from synthesis gas. Compression is provided using two IR 4 HHE-1-3 reciprocating units of 500 HP each to two different pressure levels, 550 and 4,600 psig.

Carbon dioxide compression is done using two 50% capacity IR 3 HHE-3 reciprocating units of 500 HP each.

Reaction Sections

Included in this section are:

Two oxonation high pressure reactors each rated at 50% of design capacity. Related high pressure feed pumps, cooling and degassing system.

Two C₈ aldehyde hydrogenation intermediate pressure reactors each rated at 50% of design capacity. Related feed pumps, cooling and catalyst reduction system.

One C₄ aldehyde and residue high pressure reactor. Related high pressure feed pumps, degassing and catalyst reduction system.

One isobutyraldehyde hydrogenation intermediate reactor and related distillation columns to produce high purity iso-butanol.

Distillation Sections

Included in this section are:

Two aldehyde stainless steel distillation columns capable of producing high purity aldehydes at plant design capacity. Related cooling heating equipment and the required pumps and separator vessels.

One aldol condensation stainless steel reactor rated at 100% of design capacity. Related equipment such as separators, pumps and vessels.

Four 2-ethylhexanol carbon steel distillation towers capable of producing high purity final alcohol at plant design capacity. Towers are designed to operate at full vacuum, if needed. Related auxiliary equipment.

Five butanols distillation columns, one of which is stainless steel and the rest carbon steel, capable of producing high purity normal butanol and high purity iso-butanol at plant design capacity.

Utilities

Included in this section are:

Steam generation which is composed of three boilers, two 100 M Lb/Hr Erie City package boilers and one 150 M Lb/Hr Combustion Engineering package boiler. All three of them have a design working pressure of 470 psig.

Instrument and plant air system which is provided by two Elliot PAP units.

Product Storage

Proper storage and shipping facilities exist for all three products, which were sold outside of Puerto Rico.

<u>Product</u>	<u>Storage Capacity, Barrels</u>
2-Ethylhexanol	170,000
Normal Butanol	55,000
Iso-Butanol	50,000

OXOCHEM, INC.

EQUIPMENT LIST

COMPRESSORS

Equipment No.	Vendor	Type	BHP	Driver-BHP
XC-0102 A&B	I-R	3 HHE-3	500	Syn. Motor-500
XC-0103 A&B	"	3 HHE-4	1,692	Syn. Motor-1,750
YC-0103 C	"	"	2,140	Syn. Motor-2,250
XC-0200 A&B	Worthington	4 HHE-1-3	356	Turb-Gear-500
XC-0401 A&B	"	HOR 3-1/4x5 HB	8.7	Motor-10
XC-0701	"	HOR 7x9 HB	45	Motor-60
XC-0901 A&B	"	HOR 5-3/16x11 HB	93	Motor-100
XC-1231 A&B	Elliott	125 M 23	-	Motor & Turbine

Equipment No.	Vendor	Type	Capacity lbs/Hr	Press. Psig	Temp. °F
XB-1201 A&B	Erie City	Package	100,000	470	570
YB-1201 C	Comb. Eng.	"	150,000	"	"

MAJOR PROCESS TOWERS

Equipment No.	Vendor	Size	Material of Construction
XV-0113	Trinity	54"x65'	SA-516-60
XV-0115	Houston	102"x67'-6"	SA-240-T-347
XV-0208	Trinity	54"x69'-6"	SA-516-60
XV-0401	Belmas	48"x30'6"	SA-240-T-316L
XV-0402	Bayport	30"x25'-6"	"
XV-0403	"	30"x36'	"
XV-0404	"	20"x35'-6"	"
XV-0502	"	126"x144'-6"	"
XV-0507	"	156"x144'-6"	"
XV-0601	Metal Arts	34"x63'-8"	" T-347
XV-0801	Nooter	72"x78'	SA-264 (Clad-347)
XV-0802	Delta Southern	84"x93'-6"	SA-285C
XV-0803	"	30"x78'	"
YV-0807	Belmas	108"x83'	"
XV-1002	Metal Arts	3 ID's	SA-240-T-347
XV-1003	Bethlehem	84"x105'-6"	SA-285C
XV-1004	Delta Southern	66"x149'	"
XV-1005	"	36"x75'-10"	"
XV-1006	Belmas	48"x48'-4"	"
XV-1014	Houston	90"x93'-6"	SA-240-T-316L
YV-1307	"	42"x21'-6"	SA-285C
	Marble		

OXOCHEM, INC.
EQUIPMENT LIST
EXCHANGERS

Equipment No.	Type-No. Shells or Sections	Vendor	Material of Construction		Total Area, Ft. ²	
			Tubes	Shell	Bare	Extended
XE-0100	DP-1	Smith	CS	CS	16.9	-
YE-0104	AC-2	Hudson	304	-	644	11,592
XE-0105	"	"	CS	-	409	7,362
XE-0106	"	"	304	-	1,116	20,090
XE-0107	"	"	"	-	558	10,037
XE-0108	AC-1	"	"	-	4,210	-
XE-0109 A&B	ST-1	IPE	"	CS	8,060	-
XE-0110	ST-2	"	"	"	7,226	130,068
XE-0111	AC-5	Hudson	304&CS	-	6,503	117,056
XE-0112	AC-3	"	304	-	300	-
XE-0113 A&B	ST-1	Western	"	CS	518	9,330
XE-0114 A&B	AC-2	Hudson	"	-	314	5,654
XE-0115 A&B	"	"	"	-	"	"
XE-0116 A&B	"	"	"	-	"	"
XE-0117 A&B	"	"	"	-	558	10,038
XE-0118 A&B	"	"	304	-	370	6,644
XE-0121 A, B&C	ST-	Dynumatic	"	-	3,867	69,626
XE-0125	AC-2	Hudson	CS	-	259	4,665
YE-0113 C	AC-1	"	CS	-	157	2,827
YE-0114 C	"	"	"	-	"	"
YE-0115 C	"	"	"	-	"	"
YE-0116 C	"	"	"	-	"	"
XE-0201	DP-2	Brown Fin tube	C-1/2 Mo	C-1/2 Mo	156	-
XE-0204	ST-1	Western	304	CS	1,604	-
XE-0205	AC-1	Hudson	304	-	558	10,037
XE-0206 A&B	ST-2	Western	C-1/2 Mo	C-1/2 Mo	746	-
XE-0207	AC-2	Hudson	CS	-	189	3,402
XE-0208 A&B	"	"	"	-	268	4,806
XE-0210 A&B	"	"	"	-	48	848
XE-0211 A&B	"	"	"	-	"	"
XE-0212 A&B	"	"	"	-	"	"
YE-0214	ST-1	Wiegman & Rose	C-1/2 Mo	C-1/2 Mo	496	-
YE-0215	"	"	"	"	278	-
YE-0216	"	"	CS	CS	405	-
YE-0217	"	"	304	"	2,520	-
YE-0219	AC-1	Hudson	"	-	848	15,496
YE-0220	ST-1	Wiegman & Rose	C-1/2 Mo	C-1/2 Mo	407	-
YE-0221	AC-1	Hudson	CS	-	353	7,484

Equipment No.	Type-No. Shells or Sections	Vendor	Material of Construction		Total Area, Ft ²	
			Tubes	Shell	Bare	Extended
YE-0301	ST-1	Western	347	347	625	-
XE-0302	ST-1	IPE	CS	-	1,085	19,530
XE-0402 A&B	AC-1	Hudson	"	-	2,390	52,025
XE-0403	AC-2	"	-	-	-	-
YE-0403	AC-	-	-	-	-	-
XE-0405	ST-1	IPE	316	CS	550	-
XE-0406	AC-1	Hudson	"	-	1,225	22,254
XE-0407	"	"	"	-	927	16,700
XE-0408	"	"	"	-	943	1,634
XE-0409	"	"	"	-	582	10,470
XE-0410	"	"	"	-	270	-
XE-0411	ST-1	IPE	"	316	377	6,786
XE-0412 A&B	AC-1	Hudson	"	-	1,070	-
XE-0413	ST-2	IPE	"	316	300	-
XE-0414 A&B	ST-1	"	"	CS	644	-
XE-0416	ST-2	EFCO	"	"	581	-
XE-0417	AC-1	Hudson	"	-	3	10,458
YE-0418	ST-1	RP-Adams	304	CS	250	-
YE-0420 A&B	"	Wiegman & Rose	316	"	471	-
XE-0421	AC-1	Hudson	"	-	2,169	9,985
XE-0422 A&B	ST-2	"	347	-	1,250	39,048
XE-0501	ST-1	IPE	"	347	2,570	-
XE-0502	"	"	"	CS	205	-
XE-0506	"	"	"	316	2,200	-
XE-0507	AC-1	Hudson	"	CS	377	6,786
XE-0508	"	"	"	-	67	1,202
XE-0509	AC-6	"	"	-	8,671	156,075
YE-0510	AC-1	"	"	-	558	10,045
YE-0511 A&B	ST-1	Western	"	-	2,155	-
YE-0512 A-H	AC	Marley	"	-	691	14,649
XE-0602	AC-1	Hudson	"	-	134	2,405
XE-0603	"	"	"	-	212	-
XE-0604	U Tube	EFCO	316	-	"	-
XE-0605	"	"	"	-	-	-
XE-0606	DP-	"	"	-	-	-
YE-0607	AC-1	Hudson	CS	-	1,123	20,214
YE-0608	U Tube	Wiegman & Rose	347	-	212	-
XE-0701 A	AC-1	Hudson	"	-	1,225	25,970
XE-0702 A&B	ST-1	IPE	347	347	625	-
XE-0704	"	"	347	CS	280	-
	AC-1	Hudson	"	-	2,169	39,048

Equipment No.	Type No. Shells or Sections	Vendor	Material of Construction		Total Area, Ft ²	
			Tubes	Shell	Bare	Extended
XE-0706	DP-1	Brown Fintube	347	CS	28	-
XE-0707	AC-1	Hudson	CS	-	94	1,696
XE-0708	"	"	316	-	274	3,676
XE-0709	"	"	"	-	274	3,676
XE-0710	"	"	347	CS	280	-
XE-0801	ST-1	IPE	"	"	640	-
XE-0802	AC-2	Hudson	"	-	2,283	35,143
XE-0802V	AC-1	"	"	-	-	-
YE-0802	AC-2	"	"	-	-	-
YE-0802V	AC-1	"	"	-	1,078	17,634
XF-0803	ST-1	Western	"	-	-	-
XE-0805	"	Abbott	CS	CS	578	-
XE-0806	AC-3	Hudson	"	-	2,000	-
XE-0807	AC-1	"	"	-	1,396	21,913
XE-0808	ST-1	Abbott	"	-	1,344	24,193
XE-0809	AC-1	Hudson	"	CS	360	-
XE-0809V	"	"	"	-	424	6,659
XE-0810	"	"	"	-	94	1,702
XF-0811	"	"	"	-	71	1,273
YE-0813	ST-1	Western	347	CS	-	-
YE-0815	"	Wiegman & Rose	"	"	-	-
YE-0816	"	"	CS	CS	-	-
YE-0817	AC-1	Hudson	CS	-	106	1,972
YE-0818	ST-1	Western	"	-	-	-
YE-0901	ST-1	IPE	316	CS&316	1,170	-
XE-0902	ST-	Yuba	"	CS	-	-
XE-0903	AC-1	Hudson	"	-	982	17,677
XE-0904	"	"	"	-	503	9,048
XE-0905	"	"	"	-	134	2,405
XE-0906 A&B	ST-2	IPE	"	316	340	-
YE-0907	AC-1	Hudson	"	-	471	9,985
YE-0908	ST-1	Yuba	"	-	-	-
YE-0909	DP-1	Brown Fintube	316	CS	294	-
XE-1001	DP-2	Smith Co.	347	"	190	-
XE-1002	ST-1	Abbott	A-170	"	890	-
XF-1003	"	"	"	"	645	-
XE-1004	"	"	A-179	"	298	-
XE-1005	AC-3	Hudson	"	-	4,335	78,037
XE-1006	AC-1	"	"	-	931	14,612
XE-1006V	"	"	"	-	-	-

Equipment No.	Type-No. Shells or Sections	Vendor	Material of Construction		Total Area, Ft ²	
			Tubes	Shell	Bare	Extended
XE-1007	AC-1	Hudson	A-179	-	413	6,465
XE-1007V	"	"	"	-		
XE-1009	"	"	"	-	220	3,960
XE-1010	"	"	"	-	47	849
XE-1011	"	"	"	-	71	1,203
XE-1012	"	"	"	-	161	2,700
XE-1013	"	"	"	-	94	1,466
XE-1014	"	"	"	-	558	10,038
XE-1015	"	"	"	-	558	10,038
XE-1016	"	"	"	-	750	-
XE-1017	ST-1	Abbott	"	CS	173	3,112
XE-1018 A&B	AC-1	Hudson	"	-	150	-
XE-1020	U-Tube	IPE	347	-	6,440	115,925
XE-1020V	AC-4	Hudson	316	-	731	13,158
XE-1022 A&B	AC-4	"	"	-	165	-
YE-1023	ST-1	IPE	316	316		
YE-1024	AC-	Hudson	"	-	250	-
YE-1025	ST-1	Wiegman & Rose	CS	CS	1,744	-
YE-1026	"	"	316	"	71	1,499
YE-1028	AC-1	Hudson	CS	CS	845	-
XE-1029	ST-1	Wiegman & Rose	347	-	542	9,756
XE-1201	AC-1	Hudson	304	-	209	-
XE-1232	ST-1	Abbott	Copper	CS	743	-
XE-1233	AC-2	Frick	SA53	-	1,037	21,979
XE-1234	ST-1	Hudson	CS	-	455	-
XE-1270	AC-1	Abbott	"	CS	167	3,540
YE-1280	AC-	Hudson	"	-		
XE-1301	DP-1	Brown Fintube	347	CS	15	-
YE-1302	AC-1	Hudson	"	-	628	19,632
YE-1303	"	"	CS	-	147	2,925
YE-1304	"	"	"	-	550	11,660
YE-1305	"	"	"	-	1,331	24,757
YE-1306	ST-1	IPE	316	CS	2,570	-
YE-1307	AC-1	Hudson	CS	-	71	1,499

**FLUOR ENGINEERS AND
CONSTRUCTORS, INC.**

SOUTHERN CALIFORNIA DIVISION
3333 MICHELSON DRIVE
IRVINE, CALIFORNIA 92730 U.S.A.
TELEPHONE: (714) 975-2000

July 26, 1979

Oxochem Plant Shutdown
Fluor Contract 471004

Commonwealth Oil Refining Company, Inc.
8636 Tesoro Drive
San Antonio, Texas 78217

Attention: Ronald Grey
Manager, Olefins

Gentlemen:

FINAL REPORT

Enclosed is the final report for the long-term preservation review and site inspection recently completed for the oxo alcohol plant in Penuelas, Puerto Rico. As a result of the inspection, Fluor believes that the procedures that have been implemented should provide the protection required to achieve long-term (two years) preservation. However, as previously discussed with you, Fluor does not guarantee the quality of the work performed.

This completes our assigned work on Contract 471004 for Oxochem Enterprise. Should you have any questions or additional requirements, please do not hesitate to contact us.

Very truly yours,



W. F. Chapin

WFC:wpc

Attachment: one with pictures, two without

cc: H. Doron, W. R. Grace and Company, Oxo Alcohol Division
900 Route 9, Woodbridge, New Jersey 07095



OXOCHEM ENTERPRISE
PENUELAS, PUERTO RICO

OXO ALCOHOL PLANT
LONG-TERM PRESERVATION REVIEW
AND
INSPECTION AT PLANT SITE

FINAL REPORT

At the request of Oxochem Enterprise, Fluor Engineers and Constructors, Inc., sent an engineering team consisting of a Mechanical Engineer, Electrical Engineer, and a Control Systems Engineer, to the plant site on July 18, 19 and 20, 1979, to review Oxochem Enterprise's long-term preservation procedures and inspect the work being done by the Catalytic Industrial Maintenance Company before plant preservation is completed.

It should be pointed out that Oxochem, W. R. Grace and Commonwealth Oil and Refining Company personnel assigned to prepare the preservation procedures, solicited advice and recommendations from the following:

- o Fluor Engineers and Constructors, Inc.
3333 Michelson Drive
Irvine, California 92730
- o Lucius Pitkin, Inc.
50 Hudson Street
New York, New York 10013
- o BASF Aktiengesellschaft
6700 Ludwigshafen
West Germany
- o Haldor Topsoe A/S
Nymøllevej 55
DK 2800 Lyngby
Copenhagen, Denmark
- o Metromation, Inc.
1101 State Road
Princeton, New Jersey 08540
- o Material and equipment suppliers

After evaluating the above background information, Oxochem prepared a set of procedures entitled "OXOCHEM ENTERPRISE PRESERVATION OF ASSETS PROCEDURE MANUAL." Fluor Engineers and Constructors believes Oxochem Enterprises' procedures for long-term (2 years) preservation, where used, should provide the protection required.

Because of heavy rain for two days, work crews were sent home and witnessing of actual work in progress was not possible. Therefore, Fluor's inspection was made in two stages.

1. First Stage -- A plant walk-through was made to observe external preservation compliance and to become familiar with the plant.
2. Second Stage -- Specific areas were selected at random for a more detailed inspection.

The inspection observations were discussed with Oxochem Enterprise during a meeting held on July 19, 1979, at 3 p.m., for their consideration and action. All recommendations were accepted and are summarized as follows:

Mechanical Engineering

Mechanical equipment preservation procedures were reviewed and found to be acceptable. For example, the reciprocating compressor piston rods, rod packing, pistons, piston rings and compressor valves are removed, preserved, and stored in the warehouse. The interior of the compressor (crankcase and compressor cylinder) is 20 percent full of VSI Circulating Oil 68 and sealed air tight. All of the compressor cylinder drop lubricators are removed, preserved, and stored in the warehouse.

Screw threads on manual gate valve stems were not coated with a preservative. Oxochem agreed to protect valve stem screws on 4-inch and larger gate valves.

Chemical inspection system tanks were partially filled with rainwater. It was suggested that tank drain valves be opened and valve handles be removed.

Reciprocating compressor WP-II drive motors:

1. Motor air intakes should be left open.

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2. An external cover over motor is not required. (These motors are under a roof with partial sides and motor air intakes are facing down approximately 6 feet above the operating floor.)

Reciprocating compressors with steam turbine drivers: Seal the turbine governor stem packing steam leak-off line.

The reciprocating compressor top crosshead shoe bearing will not receive rust inhibiting oil during a bar-over of the flywheel. Therefore, the auxiliary lube oil pump is to be put back into service. The pump is to be "on" only when barring-over compressor (every two weeks).

Boiler feedwater pump (was opened for repair):

1. Fill tapped holes with rust inhibiting grease. Do not use Petrotex I-X in threaded holes.
2. Apply Petrotex I-X to exposed machined surfaces.
3. Tighten horizontal joint nuts to protect stud threads.

Plant and instrument air compressor (Elliott):

1. Cover air intake filter-silencer and discharge blow-off silencer with plastic, then seal with duct tape.
2. Cover or plug portable air compressor connection.

A scheduled inspection of all taping is suggested to assure that airtight seals are maintained.

Electrical Engineering

The Electrical Preservation Procedures were reviewed with Oxochem Enterprise personnel. The procedures were found to be within the guidelines previously recommended by the Electrical Department of Fluor Engineers and Constructors. After this review, an inspection of the plant's electrical distribution system was performed. The following recommendations and comments were made:

1. Transformers were lightly loaded and, during the rain, some of their pressure gauges were showing negative pressures. This means that air and moisture were being drawn into the transformer and

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contaminating the insulation oil. To prevent this situation from recurring, Fluor recommended that a larger number of lights be energized so that the transformers would operate at a higher temperature and at a positive pressure.

2. Motor heater circuits were not energized because the motor feeder circuit breakers had been opened. Oxochem corrected this situation immediately.
3. Fluor recommended that Oxochem have their maintenance people take periodic reading of both volts and amperes in the heater circuits in order to detect circuit failures.

Control Systems

The procedure was described and reviewed with Corco, Grace, Oxochem and Catalytic personnel. The preservative materials actually used for mothballing were favorably compared with those that Fluor originally recommended in the procedure. Reasonably quick delivery of the materials proved to be one of the biggest problems. Two of the materials proved to be particularly more advantageous than originally anticipated. Cortec VCI-170 corrosion inhibiting tapes had the advantage of being easy to measure and handle and, because of its self-adhesive properties, it can be placed to stay where desired. The Griffolyn nylon weave reinforced black plastic used for wrapping is much stronger than plain plastic and difficult to tear even if cut.

In general, the procedure calls for all field components (electrical, pneumatic and mechanical) requiring protection to be cleaned, apply VCI-170 inside case if necessary, apply Petrotect 1-X to exposed metal parts such as valve stems and springs, and then wrap and tape-seal the unit with black nylon reinforced plastic. In contradiction with the procedures, weatherproof or explosion-proof instruments like transmitters had tape applied directly to the joints and vents of the cases after cleaning and application of the VIC-170. This provides a more compact, secure seal without the possibility of the black plastic wrap being ripped.

Random assemblies that had already been mothballed were opened up and inspected for compliance with the procedures. The mothballing was performed by the same personnel that had done the instrument maintenance while the plant was operating and the workmanship reflects a knowledge and appreciation of the systems and components.

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One of the analyzer houses was opened for inspection after being sealed for almost a month. Each individual analyzer had been cleaned and purged, had VCI-170 applied inside, wrapped with heavy plastic, and sealed with tape. The house itself had the louvered openings sealed with plastic and tape and other openings were sealed as well as possible. A strip of VCI-170 had been stuck to the ceiling but it was decided to sprinkle Cortec VCI-309 powder at the base of the analyzer supports closer to items that might need protection. There was evidence of water leakage through the roof (after a record rainfall), which will be corrected, and prompted reinspection of the other analyzer houses.

The control room will be left essentially as is, except that the temperature monitoring console will be cleaned, have the corrosion inhibitor applied, plastic-wrapped, and tape-sealed. Air conditioning will be maintained and two to four men will be at the facility round-the-clock.

The original procedure for the computer equipment was to move everything (computer cabinets, terminals, CRT monitor, spare parts, etc.) into the computer room. Then tape-seal the computer room and maintain the independent air conditioning unit running in that room. Upon inspection there was evidence of rainwater leakage through the air conditioner wall opening. It was decided (and a procedure written) to remove the air conditioning unit, seal the wall opening, clean, apply the inhibitor, plastic-wrap, and tape-seal each computer assembly as was done with the laboratory equipment. The computer room door will remain open for ready inspection and air conditioning will be maintained by the Control Building System.

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